

Claims

- 1) A labelling and/or marking machine comprising a feed conveyor (4) rotatable about a vertical axis (5) and equipped peripherally with a plurality of pedestals (8) supporting single containers (2); drive means (9, 37) associated respectively with the conveyor (4), by which the containers (2) are directed along a predetermined conveying path (17), and with the single pedestals (8) in such a way that each pedestal can be driven in rotation about a respective vertical axis (38); applicator and/or marker means (26, 27) occupying positions along the predetermined conveying path (17); and means (30) by which to detect and control the angular position of the containers (2), characterized in that the detection and control means (30) comprise at least one CCD image sensor (31, 39) capable of detecting and recognizing predetermined outlines (32) presented by the containers (2).
- 20 2) A machine as in claim 1, wherein the CCD image sensors (31, 39) comprise a memory (34) by means of which to store at least the shape of one reference sample outline, and respective sensing and control means (35) serving to measure the degree of similarity between the reference sample outline and the detected outline (32).

3) A machine as in claims 1 and 2, comprising a master control unit (36) connected on the input side to the CCD image sensor (31, 39), and on the output side to the drive means (9, 37) associated respectively with the conveyor (4) and with each of the pedestals (8).

4) A machine as in claims 1 to 3, comprising a CCD image sensor (39) occupying a fixed position relative to the rotating feed conveyor (4).

10 5) A machine as in claims 1 to 3, comprising a plurality of CCD image sensors (31) mounted rigidly to the rotating feed conveyor (4), each associated with a relative pedestal (8) supporting a container (2).

15 6) A machine as in claims 4 and 5, wherein the rotating conveyor (4) is set in motion intermittently through the agency of respective drive means (9).

20 7) A machine as in claim 5, wherein the rotating conveyor (4) is set in motion continuously through the agency of respective drive means (9).

8) A machine as in claim 3, wherein the master control unit (36) receives a signal from the CCD image sensor (31, 39) indicating the angular position of the predetermined outline (32) presented by a

respective container (2) relative to the conveyor (4), and responds by sending a control signal to the drive means (37) associated with the pedestal (8) supporting a container (2), such as will cause the 5 pedestal (8) to rotate through a predetermined angle and into a position coinciding with a predetermined position programmed by way of the labelling and/or marking means (26, 27).

9) A machine as in claim 8, wherein the master 10 control unit (36) is designed to respond, once the pedestal (8) has reached the predetermined position programmed by way of the labelling and/or marking means (26, 27), by deactivating the drive means (37) associated with the pedestal (8).

15 10) A machine as in claims 1 to 9, wherein the applicator means (26, 27) positioned along the predetermined conveying path (17) comprise at least one device such as will affix a label to a predetermined area (28) of the lateral surface (29) 20 presented by each container (2).

11) A machine as in claims 1 to 9, wherein the marker means (27) positioned along the predetermined conveying path (17) comprise at least one device such as will apply lettering and/or an image and/or a logo or graphic symbol to a predetermined area (28) of the 25 lateral surface (29) presented by each container (2).